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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER WYLLIE, CHRISTOPHER T				
ART UNIT 2619		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/558,432

Applicant(s)

BAEK ET AL.

Examiner

CHRISTOPHER T. WYLLIE

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 18 is/are rejected.
- 7) ☒ Claim(s) 15 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 11/29/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED OFFICE ACTION

1. Claims 1-18 are pending in Application 10/558,432.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1,5,14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New Control Protocol For Home Appliances –LnCP -2001) in view of Putterman et al. (US 2004/0088731).

Regarding claim 1, Lee et al discloses at least two electric devices (**see p. 287, Figure 1 the Network Manager and the Refrigerator**) and a network based on a predetermined protocol for connecting the electric devices (**see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus]**), wherein a message transmitted between one device and the other device comprises a command code field implying an operation that is to be performed by the other device and an argument field (**see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) sends the slave (the refrigerator) a request message that includes a Command Code Field and an Argument Field]**). Lee et al. does not disclose the argument field is according to a version of a protocol applied to the electric device performing the operation. However, Putterman et al. discloses such a feature (**see paragraph 0048, lines 7-14 [the protocol is effectuated through the requests and the responses, the RPC packet has an identification field that identifies the request which is the same as the argument field]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Putterman et al. into the system of Lee et al. The method of Putterman et al. can be implemented by enabling

the Network Manager (the master device) to create a request message that has an argument field based on the protocol used.

Regarding claim 5, Lee et al. further disclose that the protocol is a living network control protocol **(see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus])**.

Regarding claim 14, Lee et al. discloses a storage means for storing a message structure in a home network system **(see Abstract, lines 16-19 [the microprocessor has memory for storing information])**, the home network system including at least two electric devices **(see p. 287, Figure 1 the Network Manager and the Refrigerator)** and a network based on a predetermined protocol for connecting the electric devices **(see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus])**, wherein a message transmitted in the home network system comprising a command code field and an argument field for executing the command code **(see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) sends the slave (the refrigerator) a request message that includes a Command Code Field and an Argument Field])**. Lee et al. does not disclose the argument field is varied according to a version of a protocol applied to the electric device performing the operation. However, Putterman et al. discloses such a feature **(see paragraph 0048, lines 7-14 [the protocol is effectuated through the requests and the responses, the RPC packet has an identification field that identifies the request which is the same as the argument field])**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Putterman et al. into the system of Lee et al. The method of Putterman et al. can be implemented by enabling the Network Manager (the master device) to create a request message that has an argument field based on the protocol used.

Regarding claim 18, Lee et al. further disclose that the protocol is a living network control protocol **(see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus])**.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New Control Protocol For Home Appliances –LnCP -2001) in view of Putterman et al. (US 2004/0088731) as applied to claim 14 above, and further in view of Walton et al. (US 5,519,858).

Regarding claim 16, the references as applied above disclose all the claimed subject matter recited in claim 14, but do not disclose when a lower version of the protocol applied to the electric device exist, the argument field comprises a basic argument field for the lower version of the of the protocol and an extend argument field for the version of protocol. However, Walton et al. discloses such a feature **(see column 12, lines 20-25 [the length of the argument field indicates the number of digits in the address portion of a particular request, the network addresses can be fixed length or vary in length, depending upon the network protocol associated with each particular address.])**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Walton et al. into the system of the references as applied above. The method of Walton et al can be implemented by enabling the Network Manager to vary the length of the argument field based on the protocol associated with the address of the refrigerator. The motivation for this is to enable the Network Manager to be adaptable to the various protocols used in the network

6. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New Control Protocol For Home Appliances –LnCP -2001) in view of Putterman et al. (US 2004/0088731) as applied to claim 1 above, and further in view of the background of Kim (US 7,062,531).

Regarding claim 2, the references as applied above disclose all the claimed subject matter recited in claim 1, but do not disclose that the other electric device receives the message, extracts the arguments from the argument field and processes the arguments. However, the background of Kim discloses such a feature **(see column 2, lines 6-13 [the modem forwards the request message to the selected domestic appliance and extracts the LnCP body of the message and determines whether or not the order or command code is for itself, if it is the domestic appliance performs the operation])**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was to implement the method as described by the background of Kim

into the system of the references as applied above. The method of the background of Kim can be implemented by enabling the refrigerator (or slave device) to extract the body of the LnCP message and process the instructions in the argument field of the body. The motivation for this is to enable the device to execute the request.

Regarding claim 3, the background of Kim further teaches the other device discards arguments not extracted from the argument field (**see column 2, lines 6-15 [if the domestic appliance determines the data packet is not for itself, it ignores the packet]]**).

Regarding claim 4, Lee et al. discloses that when the arguments in the argument field are deficient, the other electric device sets the deficient arguments as predetermined values (**see Figure 7b. Response Message and p. 290, lines 36-42 [the input arguments form the network manager become deficient after the refrigerator (or slave device) executes the command code and replaces the input arguments with either an ACK or NAK and return arguments]]**).

7. Claim 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New Control Protocol For Home Appliances –LnCP -2001) in view of Putterman et al. (US 2004/0088731 and in view of the background of Kim (US 7,062,531).

Regarding claim 6, Lee et al. discloses an electric device (**see p. 287, Figure 1 the Refrigerator**) based on a predetermined protocol (**see Abstract, lines 1-9 [the protocol linking all the devices is LnCP]**) including at least a lower layer (**see p. 287, Figure 1, the Network Manager [the network manager is part of the physical**

layer]] and a upper layer (see Abstract, lines 1-9 [the power line is the data link layer and is used as a network bus]), wherein the upper layer receives from the lower layer a message including a command field implying an operation that is to be applied by the electric device and an argument field (see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) sends via the data link layer (the Power Line Bus) a request message that includes a Command Code Field and an Argument Field to the slave (the refrigerator)]). Lee et al. does not disclose the argument field is according to a version of a protocol applied to the electric device performing the operation. However, Putterman et al. discloses such a feature (see paragraph 0048, lines 7-14 [the protocol is effectuated through the requests and the responses, the RPC packet has an identification field that identifies the request which is the same as the argument field]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Putterman et al. into the system of Lee et al. The method of Putterman et al. can be implemented by enabling the Network Manager (the master device) to create a request message that has an argument field based on the protocol used.

The references as applied above do not disclose that the other electric device receives the message, extracts the arguments from the argument field and processes the arguments. However, the background of Kim discloses such a feature (see column 2, lines 6-13 [the modem forwards the request message to the selected domestic appliance and extracts the LnCP body of the message and determines whether or

not the order or command code is for itself, if it is the domestic appliance performs the operation]]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was to implement the method as described by the background of Kim into the system of the references as applied above. The method of the background of Kim can be implemented by enabling the refrigerator (or slave device) to extract the body of the LnCP message and process the instructions in the argument field of the body. The motivation for this is to enable the device to execute the request.

Regarding claim 7, the background of Kim further teaches the other device discards arguments not extracted from the argument field **(see column 2, lines 6-15 [if the domestic appliance determines the data packet is not for itself, it ignores the packet])**.

Regarding claim 8, Lee et al. discloses that when the arguments in the argument field are deficient, the other electric device sets the deficient arguments as predetermined values **(see Figure 7b. Response Message and p. 290, lines 36-42 [the input arguments form the network manager become deficient after the refrigerator (or slave device) executes the command code and replaces the input arguments with either an ACK or NAK and return arguments])**.

Regarding claim 9, Lee et al. further disclose that the protocol is a living network control protocol **(see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus])**.

Regarding claim 10, Lee et al. discloses a method for processing a message in a home network system, the home network system including at least two electrical devices (**see p. 287, Figure 1 the Network Manager and the Refrigerator**) and a network based on a predetermined protocol for connecting the devices (**see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus]**), the method comprising generating and transmitting, at one electrical device a message including a command code field implying an operation that is to be performed by the other electric device and an argument field (**see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) generates and sends the slave (the refrigerator) a request message that includes a Command Code Field and an Argument Field]**). Lee et al. does not disclose the argument field is according to a version of a protocol applied to the electric device performing the operation. However, Putterman et al. discloses such a feature (**see paragraph 0048, lines 7-14 [the protocol is effectuated through the requests and the responses, the RPC packet has an identification field that identifies the request which is the same as the argument field]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Putterman et al. into the system of Lee et al. The method of Putterman et al. can be implemented by enabling the Network Manager (the master device) to create a request message that has an argument field based on the protocol used.

The references as applied above do not disclose extracting at the other electric device the command code from the message and extracting arguments from the argument field and executing the command code. However, the background of Kim discloses such a feature **(see column 2, lines 6-13 [the modem forwards the request message to the selected domestic appliance and extracts the LnCP body of the message and determines whether or not the order or command code is for itself, if it is the domestic appliance performs the operation])**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was to implement the method as described by the background of Kim into the system of the references as applied above. The method of the background of Kim can be implemented by enabling the refrigerator (or slave device) to extract the body of the LnCP message and process the instructions in the argument field of the body. The motivation for this is to enable the device to execute the request.

Regarding claim 11, the background of Kim further teaches the other device discards arguments not extracted from the argument field **(see column 2, lines 6-15 [if the domestic appliance determines the data packet is not for itself, it ignores the packet])**.

Regarding claim 12, Lee et al. discloses that when the arguments in the argument field are deficient, the other electric device sets the deficient arguments as predetermined values **(see Figure 7b. Response Message and p. 290, lines 36-42 [the input arguments from the network manager become deficient after the**

refrigerator (or slave device) executes the command code and replaces the input arguments with either an ACK or NAK and return arguments]]).

Regarding claim 13, Lee et al. further disclose that the protocol is a living network control protocol **(see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus])**.

Claim Objections

8. Claims 15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER T. WYLLIE whose telephone number is (571) 270-3937. The examiner can normally be reached on Monday through Friday 8:30am to 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher T. Wyllie/
Examiner, Art Unit 2619

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619